PCIA *Personal Communications Industry Association*

EX PARTE OR LATE FILED

RECEIVED

MAR 24 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

March 24, 1997

William F. Caton
Acting Secretary
Federal Communications Commission
Room 200, 1919 M Street, NW
Washington, D.C. 20554

Re: Ex Parte Notification
Docket No. 94-102

Dear Mr. Caton:

The purpose of this letter is to notify the Commission, pursuant to Section 1.1206(a)(2) of the Commission's Rules, that on March 21, 1997, the following parties listed below met with John Cimko, David Wye, Nancy Boocker, and Won Kim of the Federal Communication Commission's Wireless Bureau.

The parties included: Mark Golden of the Personal Communications Industry Association (henceforth referenced as PCIA); Mary Madigan of PCIA; Craig Krueger of PCIA; Barbara Baffer of Ericsson; Ben Almond of BELLSOUTH; Linda Lancaster of BELLSOUTH; J.M. McGarrah of BELLSOUTH; Gina Harrison of PacTel; Mary Brooner of Motorola; Gary Jones of Omnipoint; Bill Todd of PrimeCo Personal Communications; Jeremy Pemble of Siemens.

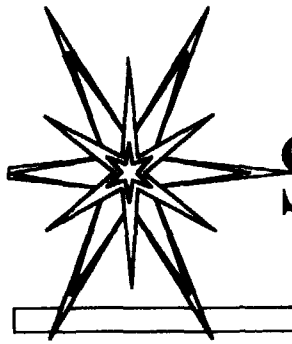
The parties discussed issues relating to the E-911 proceeding, Docket No. 94-102. The enclosed attachment was distributed to all parties attending this ex parte meeting. This attachment provides a complete summary of the issues discussed at this ex parte meeting. Should you have any questions regarding the matter, please call me.

Respectfully submitted,

No. of Copies rec'd 0+1
List ABCDE

Craig A. Krueger
Manager Government Relations-Federal Affairs

• 500 Montgomery Street • Suite 700 • Alexandria, VA 22314-1561 •
• Tel: 703-739-0300 • Fax: 703-836-1608 • Web Address: http://www.pcia.com •

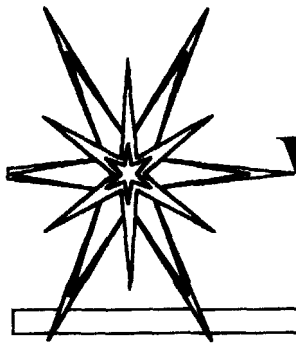


Status of Phase I Implementation

- Industry is making good progress
- E911 Standard is almost ready for balloting
- There are several companies developing solutions for Phase I

Concerns with Phase I

- Wireless TTY Implementation
- E911 Access from any handset
  - Problem for wireless industry
  - Problem for public safety community
- Wireless carrier immunity

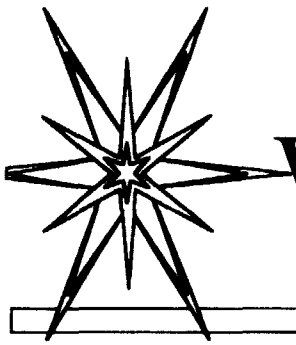


Wireless TTY Implementation

- **Wireless and TTY manufacturers working jointly**
  - Siemens, Nortel, Nokia, Ericsson, Motorola, Mitsubishi, Philips, Ultratec
- **All existing TTY/TDD equipment designed for wireline**
  - Many TTY devices only accommodate acoustic coupling which is form fitted for wireline handsets
  - Many TTY devices require dial tone and/or line current to function

Wireless TTY Implementation

- **Wireless handsets may not be compatible with existing TTY/TDD equipment**
  - TTY devices do not use the same communications protocols as other data devices
  - A different form factor for wireless handset will be needed for acoustic coupling
- **A direct connection between the handset and the TTY/TDD device may be practical**
  - The signal conversion through vocoders must be addressed
  - The conceptual idea must be tested
  - If found impractical, other solutions must be sought

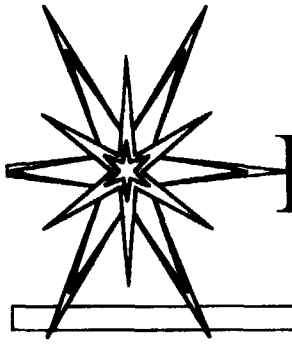


Wireless TTY Implementation

- Certain TTY/TDD equipment may require modification or adjunct equipment from TTY/TDD manufacturers in order to operate with wireless handsets.

- Proposed Wireless Compatibility Definition:

  Wireless equipment and wireless service providers shall be considered "compatible" with TTY/TDD devices, if such equipment or services systems enable TTY/TDD users to place calls on the wireless system with TTY/TDD equipment that has been designed to communicate on a wireless network.



E911 Access

- Definition of code identified should be based on mobile directory number.
- The Proposed Definition of "Code Identified":

  A unique identifier from which the directory number (if any) associated with a mobile unit may be derived. The directory number may be derived directly from the code identifier (e.g. MIN) or via a database lookup (e.g. IMSI). The code identifier may be assigned to a mobile unit or may be assigned to an inserted User Identify Module (UIM).

Code Identification Issues

Situation	Contributing to Enhanced 911 Capability	Code Identified[1]	Service Initialized/ Mobile Directory Number	Set Uniquely Identifiable/ Callback Capability
New handset, just out of the box	No	Yes	No	No
Disconnected handset, number not yet reused	No	Yes	No	Yes/No
Disconnected handset, number reassigned to new subscriber	No	Yes	No	No
Cloned handset	No	Yes	Yes	No
Handset w/only 911 capability	No	Yes	No	No
Handset from any new or current customer of any wireless carrier	Yes	Yes	Yes	Yes

[1] Our interpretation of "Code Identified" seems to indicate that any handset which contains any Mobile Identification Number (MIN) or International Mobile Subscriber Number (IMSI), whether associated with a subscriber or not, can be viewed as being Code Identified. A MIN or IMSI must exist in a handset for the network to recognize and facilitate a call from that handset to Customer Service or Service Initialization Center. This MIN or IMSI can be any combination of digits such as all 0's or all 9's, both of which are typically preprogrammed in new sets. When service is initialized, the MIN or IMSI is changed to be actually the subscriber's mobile directory number or to be associated with the subscriber's mobile directory number, in the case of IMSI.

Code Identification Issues

The FCC's definition of code identification is unworkable when applied to a variety of possible handset situations and when considering the desires and expectations of public safety agencies. The following are six examples of "real world" handset situations which must be addressed by CMRS carriers to meet October 1, 1997 requirements.

1. New handset, just out of the box - This type handset has been purchased (or taken) from a retail center but has not been service initialized by any CMRS provider. Typically, these handsets are pre-programmed with default values in the MIN/IMSI based field to facilitate initialization. However, the default values do not represent valid directory numbers therefore calls cannot be made except possibly to a CMRS provider's customer service center.
2. Disconnect handset, number not yet reused - This set was previously provided a directory number when the user subscribed to wireless service. Although service has since been disconnected, the directory number still remains programmed in the handset. In today's environment, any calls to or from this set would be blocked by the carrier.
3. Disconnected handset, number reassigned to new subscriber - A handset in this category would not be able to receive or make calls. The old directory number would still reside in the set, however, the carrier's validation database would not recognize the old set as valid because the directory number would now be associated with a new handset. A call made to this number would only ring the new handset.
4. Cloned handset - This is a handset which has been illegally altered to allow it to make calls using another handset's valid subscription. It cannot make or receive calls when the other handset is in use.
5. Handset with only 911 capability - These sets are typically sold in specialty stores and through catalogs. They can only make calls to 911 and cannot receive calls.
6. Handset from any new or current customer of any wireless carrier- These sets are commonly referred to as "service-initialized" sets. They are recognized as valid subscribers by their carrier and thus can make and receive calls.

Code Identification Issues

Based on our interpretation of the FCC's definition of code identification and its requirements to pass all code identified calls without validation, our matrix identifies a number of problems for PSAPs and our wireless customers.

- Only service initialized handsets will be contributing to the costs of wireless 911.
- PSAP call back to disconnected numbers or cloned phones may not reach the intended caller.
- PSAP call back is not possible to handsets which have not been assigned a unique directory number.
- PSAPs will not be able to trace prank or threatening calls unless the caller is a valid subscriber.

E911 Access

- Problems with access from non-code identified handsets
  - No call-back capability - number one priority for PSAPs
  - High likelihood of fraudulent and prank calls - no danger of identification

PSAP Choice of Call Acceptance

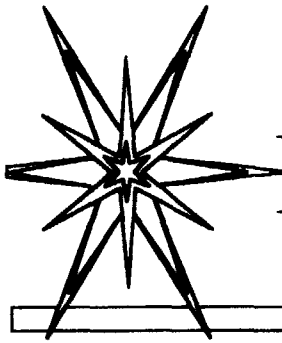
- Allowing PSAPs to choose whether or not they will accept calls from non-code identified handsets is problematic.
  - Technical considerations
  - Administrative considerations
  - Liability issues
  - Customer confusion

Liability Immunity for Wireless Carriers

- Wireline local exchange carriers receive liability coverage at the state level
- Since CMRS is not regulated or tariffed at the state or local level, it is appropriate for the FCC to provide liability coverage for wireless carriers.
- Reasons for liability protection
  - PSAPs changing boundaries
  - Radio propagation
  - Intervening network failure
  - Handset and phone number anomalies

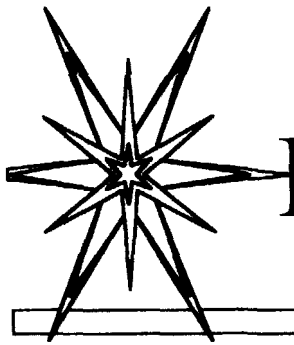
Status of Phase II Implementation

- Location
  - Current trials address only one analog air interface technology
  - Current trials in favorable terrain
  - All agree that location for digital technologies represents a significant challenge



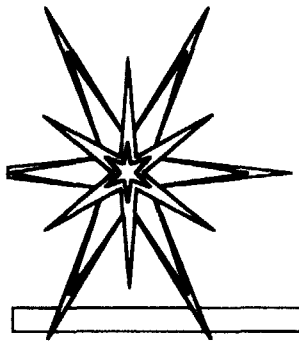
Phase II Implementation Cost

- Currently about $50K per base station
- Currently, 25,000 towers deployed
- Estimated additional 100,000 towers over the next decade
- *Not every base station uses a tower*
- $6.250 Billion estimate, *just for wireless component*
- NJ estimates its cost to be $100 Million



Phase II Accuracy

- A single level of accuracy for all environments - rural, urban, urban high rise and suburban - and for all different types of terrain is unattainable
  - Single base station sighting (from a boat, rural, tunnel, etc.)
  - Multiple radio reflections and shadowing (urban high rise)
  - Even three base station triangulation may be problematic for some air interface technologies



Wireless 911 Coalition

Bell Atlantic NYNEX Mobile, BellSouth, Ericsson, Motorola, Nortel, Omnipoint, Pacific Bell Mobile Services, PrimeCo Personal Communications, PCIA, Siemens

FNPRM Issues

- Location - if we can't figure out 125 meters, 40 feet in three dimensions is not possible
- A new level of accuracy will require a completely new technology - huge cost to the public
- Value of location update information is questionable
- Strongest signal access is not practical with diverse air interface technologies